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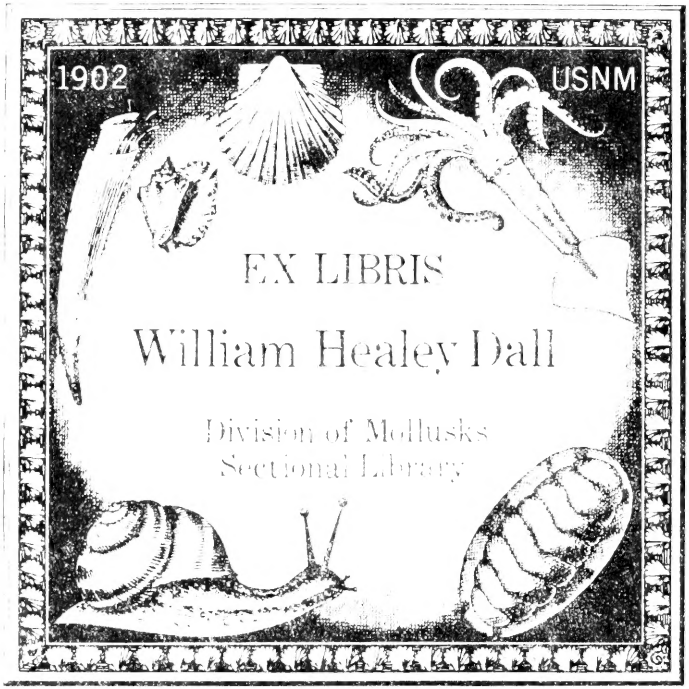
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SHELLS OF NEW ENGLAND.

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A REVISION OF THE SYNONYMY

OF THE

# TESTACEOUS MOLLUSKS

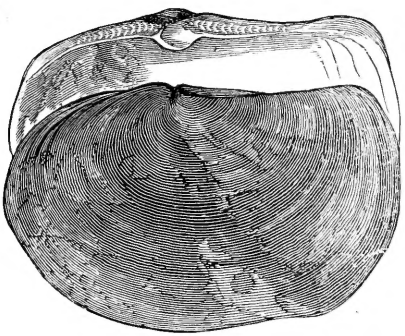
OF

## NEW ENGLAND,

WITH NOTES ON THEIR STRUCTURE, AND THEIR GEOGRAPHICAL AND BATHYMETRICAL DISTRIBUTION.

WITH FIGURES OF NEW SPECIES.

By WILLIAM STIMPSON.



Leda thraciæformis.

BOSTON:
PHILLIPS, SAMPSON, AND COMPANY.
1851.

12422
FEB 8 1853

CAMBRIDGE:

METCALF AND COMPANY,

PRINTERS TO THE UNIVERSITY.

# PRELIMINARY REMARKS.

It is now ten years since the publication of Dr. Gould's "Invertebrata of Massachusetts," the most valuable work on American Conchology which has yet appeared. This work, from the full and judicious descriptions it contains, must always remain a standard for the accurate determination of the species of which it treats. But the rapid progress which has been made in Malacology during the last few years, and the new principles which have been introduced into the science, render necessary a great change in the arrangement and nomenclature adopted in that Report. The work now offered to the public is intended to contain all the species which have been detected in New England up to the present moment, arranged and named in accordance with the present state of our knowledge. To show the necessity of such a work at the present time, I may mention that, of the three hundred and forty-four species here mentioned, only one hundred and thirty-seven are described in Dr.

Gould's Report under the same names, and yet the changes made are only such as the present state of the science demands, and as result from examinations of the animal in species in which it was before unknown. Since attention has been directed to the subject, the researches of zoölogists on the coasts of Greenland, Norway, Sweden, Denmark, Great Britain, and Sicily, — as Möller, Sars, Lovèn, Forbes, Clark, Alder, Philippi, and others, — have made us acquainted with the molluscous animals of those countries, some of which are identical with those of our own. I have myself made descriptions and figures of nearly all the species found on the New England coast, which I shall take some other opportunity to publish.

The number of species now added to the number described in Dr. Gould's work is eighty-four.

For the arrangement of the Gasteropoda, I have adopted, with a few trifling modifications, that of Professor Forbes and Mr. Hanley, in the "British Mollusca and their Shells," a magnificent and extended work which has been in the course of publication during the last four years. In some points I should have preferred to deviate from this classification, but as we must still remain far from the truth, in a class in which the true relations of the groups are so little known, I have used the approved mode as most convenient and conducive to uniformity, until more certain data are derived from Embryology and Homology.

In the classification of the Acephala, it will be seen that I have reversed the usual order, and made other modifications of the established arrangement. For explanations of my views

on this subject, see a paper in the Proceedings of the Boston Society of Natural History, Nov. 1851.

In citing authorities I have referred to the author who gave to the species the name which it now bears; — the whole name, and not a part of it. I need only refer, as authority for so doing, to the names of Linnæus, Cuvier, and Agassiz. The practice of citing the author who gave the specific designation — a part of the name — is an *innovation*, which has become frequent among Conchologists during the last thirty years.

As the importance of an accurate knowledge of the distribution of animals over the earth is now generally admitted, I have paid particular attention to the geographical and bathymetrical, or horizontal and vertical range of each species on our coast. To indicate the vertical range, I have used the terms applied to the zones of the sea by Professor Forbes, viz.: —

*Littoral*, the space between high and low water marks.

*Laminarian*, from low water mark to fifteen fathoms.

*Coralline*, from fifteen to fifty fathoms.

*Deep Sea Coral*, from fifty to one hundred fathoms and over.

Many of our species have been hitherto obtained only from the stomachs of the ground-feeding fishes, and therefore their true localities, and the depths at which they live, have remained unknown. The notes of dredging excursions furnished me by my friends, and my own operations, have enabled me in most cases to give these localities and depths with accuracy; and wherever they are mentioned, they are those at which the species has been taken with the dredge. As authority for these localities I have referred to the gentlemen by whom they were

ascertained. Some of these are mentioned below, with the abbreviations I have used.

| | |
|---|---|
| Prof. C. B. Adams, of Amherst, Mass. | Ad. |
| Prof. L. Agassiz, of Cambridge, Mass. | Ag. |
| Capt. N. Atwood, of Provincetown, Mass. | Atw. |
| U. S. Coast Survey, Prof. A. D. Bache, Sup. | C. S. |
| Mr. T. C. Haskell, of Lynn, Mass. | Hask. |
| Dr. J. B. Holder, of Lynn, Mass. | Hold. |
| Mr. James P. Low, of Charlestown, Mass. | Low. |
| Dr. J. W. Mighels, formerly of Portland, Me. | Migh. |
| Mr. Robert F. Parker, of Nantucket. | Park. |
| Mr. Temple Prime, of New York. | Prime. |
| Dr. J. Ray, of Providence, R. I. | Ray. |
| Gen. J. G. Totten, U. S. A. | Tot. |
| Mr. J. True, of Salem, Mass. | True. |
| Mr. S. Tufts, of Lynn, Mass. | Tufts. |
| Capt. Walden, of Cutter, "Hamilton." | Wald. |
| Dr. Henry Wheatland, of Salem, Mass. | Wh. |
| The Author. | W. S. |

# ACEPHALA.

## BRACHIOPODA.

### TEREBRATULIDÆ.

Terebratula septentrionalis, Couth. *T. caput-serpentis*, Gould, 141. (non Lam.) — Laminarian to Deep Sea Coral. Eastport at low water, common. Off Isles of Shoals, 20 f. (Wh.), to Cape Cod.

This species differs from the European *caput-serpentis* sufficiently in both shell and animal.

Hypothyris psittacea, King, An. and Mag. Nat. Hist. xviii. 238. Forbes and Hanley, Brit. Moll. 346. *Terebratula psittacea*, Lam. Gould, 142, f. 91. — Deep Sea Coral Zone. Northern Coast.

## LAMELLIBRANCHIATA.

### ANOMIADÆ.

Anomia ephippium, Linn., et vars. *aculeata*, *squamula*, et *electrica*. — Littoral to Coralline. Whole Coast.

## OSTREADÆ.

Ostrea borealis, Lam., etc. — Buzzard's Bay. Litt.

## PECTENIDÆ.

Pecten Magellanicus, Lam. Gould, 132. (*Ostrea* Gmel. — Whole Coast. Lamin. Corall.

P. Islandicus, Müll. Gould, 133, f. 89. — Eastport, Me. to Conn. Lamin. to Dp. S. Corall.

P. irradians, Lam. *P. concentricus*, Say, 1821. Gould, 134, f. 88. (fide Phil.) — Litt. From Cape Ann southward.

P. fuscus, Linsley, Conn. Cat. 126, desc. by Gould, Am. Jour. Sept. 1848.

## ARCADÆ.

Arca transversa, Say, 1821. Gould, 96. — Cape Cod southward. Lamin.

A. pexata, Say, 1821. Gould, 95, f. 60. — Cape Cod southward. Litt. Lamin.

## NUCULIDÆ.

The absence of a byssus, the form of the branchiæ, the crenation of the foot, and the great development of the labial tentacles, seem characters sufficient to separate this family from the *Arcadæ*.

Nucula proxima, Say. Gould, 103, f. 63. — Lamin. Whole Coast.

N. tenuis, Turt. Gould, 105, f. 64. *Arca tenuis*, Mont. — Corall.

N. DELPHINODONTA, Migh. et Ad., Bost. Jour. iv. 40. Stimpson, Bost. Proc. iv. 13. — Lamin. Whole Coast.

LEDA THRACIÆFORMIS, Stimpson, Bost. Proc. iv. 26. *Nucula thraciæformis*, Storer. Gould, 97, f. 66. *N. navicularis*, Couth. Gould, 103. — Corall. St. Andrew's Bay in 10 f. and off Head Harbor, Campo-bello, in 40 f. (W. S.) In deep water off the coasts of Maine and Massachusetts, and off Race Pt., Cape Cod, in 30 f. Off Fire Island, L. I., in 10 f. (C. S.)

The genus *Leda* was separated from *Nucula* by Schumacher in 1817. It presents great differences from that genus as now restricted, both in animal and shell; — *Nucula* having its mantle open throughout, without siphons, while in *Leda* they are well developed. (See Möller, Index Moll. Grönl.; Lovèn, Index Moll. Scand. 34; and Forbes and Hanley, Brit. Moll., ii. 214.) Under Möller's genus *Yoldia* — "Animal tubis longis curvatis instructum; pede magno, valido; pallio toto aperto, marginibus posticè ciliatis" — will come our species *thraciæformis*, *obesa*, *sapotilla*, *Cascoensis*, *myalis*, and *limatula*, the animals of nearly all of which I have examined. In some of them the mantle is ciliated all around, and it has two thickenings, one anteriorly just before the foot, and one posteriorly just before the siphons. In *L. limatula* I have seen the produced exterior palpi protruded from the posterior thickened margins, as from a sheath, — the palpi gyrating rapidly in the water as if in search of food. *L. tenuisulcata* has no such struct-

ure. For the present I prefer to follow Professor Forbes in uniting *Yoldia* with *Leda*.

L. OBESA, St., Pl. II. f. 1. Bost. Proc. Oct. 1851. T. parva, tenuis, ovalis, inæquilateralis, posticè longior, epidermide nitido, tenuistriato; apicibus parvis; margine ventrali modicè arcuato: areola parum conspicua; dentibus anticis decem, posticis duodecim, parvis. Long. .22, lat. .12, poll.

This species is narrower and more inflated than the young of *L. thraciæformis*. Prof. Adams informs me that it is the *N. navicularis* of Mighels, (Maine Cat.) It is certainly not that of Couthouy. It was taken in deep water in Mass. Bay.

L. SAPOTILLA, St. *Nucula sapotilla*, Gould, 100, f. 61. — Corall. Eastport Harbor, 10 f. mud, (W. S.) Provincetown Harb. deep water, sand, (Totten.) It inhabits also the coast between these points.

L. CASCOENSIS, St. *Nucula Cascoensis*, Migh. et Ad. Bost. Jour. iv. 40. — Casco Bay. Very probably a variety of *L. myalis*.

L. MYALIS, St. *Nucula myalis*, Couth., 1838. Gould, 99. *Yoldia angularis*, Möll. 1842. (?) — Eastport to Cape Cod.

L. LIMATULA, St. *Nucula limatula*, Say. Gould, 98, f. 62. — Whole Coast. Laminarian. Eastport in 6 f. mud, (W. S.) Portland Harbor, (Migh.) Salem Harbor, 1 to 3 f. (Wh.) Boston Harbor, 2 to 10 f. mud and sand, (W. S.) Vineyard Sound, (Ag.) Off Pasque I. 5 miles from land, in 8 f. (Prime and W. S.)

L. TENUISULCATA, St. *Nucula tenuisulcata*, Couth. 1838.

*N. minuta*, Gould, 101. (non O. Fab.) — Corall. Eastport Harb. in 6 f., also off Grand Manan in 40 f. (W. S.) Off Isles of Shoals in 20 f. (Wh.) Provincetown Harb. (Tott.)

## MYTILIDÆ.

After an examination of the animals of our species of this family, I have arrived at the conclusion that the genera *Modiola*, *Crenella*, *Modiolaria*, etc., should be reunited to *Mytilus*, since I have found as great differences between the species of these subgenera as among the subgenera themselves. In the last edition of the "Règne Animal," the eggs of *Mytilus* are said to be found in the mantle. In an examination of several individuals of *M. edulis* by Dr. Burnett and myself, we found the glands of the mantle filled with spermatozoa. The spermatiferous glands are arranged differently in different species. In *M. discors* they present a beautiful dendritic appearance, occupying nearly the whole extent of the mantle. In some species they appear to occupy only that portion of the mantle which is united with the abdominal mass.

MYTILUS DECUSSATUS, Mont. *Modiola glandula*, Tott. Gould, 131, f. 87. *Crenella decussata*, Dekay. F. et H. — Laminarian. Whole Coast. Eastport in 4 to 40 f. sandy mud, (W. S.) Off Isles of Shoals, 20 f. sand (Wh.) Provincetown at low water, (Low.) Stonington, (Linsley,) and at intermediate points.

M. PECTINULUS, St. *Modiola pectinula*, Gould, 127, f. 85.

— Corall. St. George's Bank. This is perhaps *M. faba*, O. Fabr.

M. CORRUGATUS, St. *Modiola discors*, Gould. (non Angl.) — Corall. Eastport, in 40 f. sandy mud, (W. S.) to Cape Cod.

M. DISCORS, Lin. *Modiola discrepans*, Lam. *Crenella discors*, F. et H. — Lamin. Eastport, from low water to 20 f. gravel, (W. S.) to Cape Cod.

M. LEVIGATUS, St. *M. discors*, O. Fabr. *Mod. lævigata*, Gray. *Mod. discrepans*, Gould, 129, f. 83. — Corall. St. George's Bank. This species differs from *M. discors*, in being larger, more ventricose, and narrower posteriorly.

M. DISCREPANS, Montagu. (in part.) *Modiola nigra*, Gray. *Mod. nexa*, Gould. (young.) *Crenella nigra*, F. et H. — Lamin. Eastport, 5 f. and Grand Manan, 40 f. (W. S.) Provincetown Harb. (Tott.) Stonington, (Lins.) It prefers shelly bottoms. The *Crenellæ* of the European shores have a habit of boring into the tests of *Ascidiæ*, (see British Mollusca, ii. 95,) which the same species on our coast do not have. They are sometimes found imbedded in sponges and massive algæ, but in this case the matrix seems to have grown around them.

M. PLICATULUS, Desh. *Modiola plicatula*, Lam. Gould, 125, f. 81. — Litt. From New Hampshire southward.

M. MODIOLUS, L. — Whole Coast. Litt. to Corall.

M. EDULIS, L. — Whole coast. Littoral.

The determinations of some of the above species by Middendorff (Mal. Ross. ii.) seem at variance with

those of other authors, and somewhat confused. I have therefore not referred to his work.

## UNIONIDÆ.

UNIO, Retzius, emend. Gills free from the abdominal sac, their posterior extremity attached to the mantle; eggs, in the female, filling the whole extent of the outer gill; mantle fringed at both siphonal openings. (Agassiz, MS.)

U. COMPLANATUS, Lea. Gould, 107, f. 68. *Mya complanata*, Soland.

EURYNEA, Rafinesque, emend. Gills attached to the abdominal sac, leaving no communication between the pedal, and the upper gill cavities; eggs received in the sacs of the posterior part of the outer gill; mantle fringed at the posterior half of its ventral edge, and at the branchial and anal siphons.

E. PRÆLONGA, Ag., MS. *Unio prælongus*, Barnes.—Lake Champlain. It is doubtful whether this species, of the North, is a variety of *U. rectus*, Lam., or not. (Ag.)

E. NASUTA, Ag., MS. *Mya nasuta*, Wood. *Unio nasutus*, Say. Gould, 109, f. 71. (non Lam.)

LAMPSILIS, Raf. emend. Gills attached; eggs in the posterior part of the outer gill; mantle fringed at both siphonal openings, and having fleshy thickenings and processes at its posterior ventral edge.

L. RADIATA, Ag., MS. *Mya radiata*, Gmel. *Unio radiata*, Lam. Gould, 110, f. 73.

L. CARIOSA, Ag., MS. *Unio cariosus*, Say. Gould, 111, f. 72.

L. OCHRACEA, Ag., MS. *Unio ochraceus*, Say. Gould, 112, f. 74.

L. VENTRICOSA, Ag., MS. *Unio ventricosus*, Barnes. — Vermont.

L. SILIQUOIDEA, Ag., MS. *Unio siliquoideus*, Barnes. — Lake Champlain. This is not identical with the Ohio River species usually called *U. siliquoideus.* (Ag.)

METAPTERA, Raf. emend. Gills attached; eggs in posterior part of gill; a broad expansion of mantle upwards; superanal opening long; both siphonal openings fringed.

M. ALATA, Ag., MS. *Unio alatus*, Say. — Lake Champlain.

M. GRACILIS, Ag., MS. *Unio gracilis*, Barnes. — Lake Champlain.

Neither of the above *Metapteræ* is identical with the Ohio River species usually designated by the same specific name. (Ag.)

COMPLANARIA, Swains. emend. Gills free, united to the mantle to its margin; outer gill filling entirely with eggs; superanal opening long; both siphonal openings fringed; palpi united along their posterior edge for two thirds of their length.

C. RUGOSA, Ag., MS. *Alasmodonta rugosa*, Barnes. — Vermont.

C. ALASMODONTINA, Ag., MS. *Unio alasmodontinus*, Barnes. *U. compressus*, Lea. — Vermont.

MARGARITANA, Schum. Gills free from abdominal sac, — their posterior extremity not united to the mantle; anal opening or region of mantle not fringed, branchial fringed.

M. ARCUATA, Phil. *Alasm. arcuata*, Barnes. Gould, 113, f. 75.

ALASMODONTA, Say, emend. Gills attached to abdominal sac, attached also to the mantle to their extremity; branchial siphon fringed, anal large, not fringed. Eggs —— ?

A. MARGINATA, Say. Gould, 116, f. 77.

STROPHITUS, Raf. emend. Gills attached; eggs received in the whole extent of the outer gill; anal opening not fringed.

S. UNDULATUS, Raf. *Anodonta undulata*, Say. Gould, 120, f. 79.

S. SCULPTILIS, Ag., MS. *Unio undulata*, Say. *Alasm. undulata*, Barnes. Gould, 115, f. 76. *Alasm. sculptilis*, Say.

ANODONTA, Brug. Gills free; eggs throughout the gill; anal opening not fringed.

A. BENEDICTENSIS, Lea. — Lake Champlain.

A. IMPLICATA, Say. Gould, 118, f. 78. — Eastern Massachusetts.

A. FLUVIATILIS, Lea. Gould, 117, f. 80. *Mytilus fluviatilis*, Dill.

A. MARGINATA, Say.

A. HOUSATONICA, Linsley, Conn. Cat. Gould, Am. Journ. 1848.

A. SUBCYLINDRACEA, Lea. — Connecticut, (fide Linsley.)

## CYCLADIDÆ.

Cyclas similis, Say. Gould, 72, f. 53.

C. rhomboidea, Say. Adams, in Thomps. Hist. Vermont.

C. elegans, Adams. Gould, 74, f. 55.

C. partumeia, Say. Gould, 73, f. 54.

C. pellucida, Prime, MS. *C. calyculata*, Adams, Thomps. Hist. Vermont.

C. truncata, Lins. Gould, Am. Jour., 1848.

C. orbicularia, Barratt. Linsley, Conn. Cat.

Pisidium dubium, Gould, in Agassiz' Lake Superior, 345. *Cyclias dubia*, Say. Gould, 75, f. 56.

P. minus, St. *Cyclas minor*, Ad. et Migh.

P. Adamsii, Prime, MS. *Cyclas nitida*, Ad. et Migh. (preoc.)

P. ventricosum, Prime. Bost. Proc., iv. 68.

## KELLIADÆ.

Montacuta elevata, St. *M. bidentata*, Gould, 59. (non Angl.) — Lamin. New Bedford Harb. (Shiverick.) On the sands of Chelsea Beach, thrown up alive, (W. S.) It differs from *M. bidentata* in the position of the beaks, and in its proportions.

Turtonia minuta, Alder. F. et H. *Venus minuta*, O. Fabr. — Litt. Mass. Bay. This species, not before noticed on our coast, I have found abundantly in June, about the roots of the *fuci* which cover the boulders at Point Shirley.

KELLIA PLANULATA, St. *K. rubra*, Gould, 60, f. 33. — Lamin. New Bedford Harb. (Shiverick.) Buzzard's Bay in 3 f. gravel, (Prime and W. S.) Boston Harb. in 5 f. shelly bottom, (W. S.) It differs from *K. rubra*, as appears from actual comparison, in its compressed form and in the minuteness of its beaks.

## LUCINIDÆ.

THYASIRA GOULDII, St. *Lucina Gouldii*, Phil. Zeitsch. für Malak. 1845, p. 74. *Lucina flexuosa*, Gould, (non Angl.) — Lamin., on sandy bottoms. Whole Coast. Eastport in 5 f. (W. S.) Salem Harb. 3 f. (Wh.) Stonington, (Lins.)

LUCINA STRIGILLA, St. *L. divaricata*, Auct. Gould, non (*Tellina*) Lin. — Nantucket. Forbes and Hanley (Brit. Moll. ii. 54) have shown this species to be distinct from the true *divaricata* of Linnæus, and as I find no other name for it, I have called it for the present by that which was applied to it as a generic name by Turton.

L. FILOSA, St. *Lucina radula*, Gould, 69, non (*Tellina*) Mont. — In 6 f. sand near Pt. Shirley, (W. S.) Phillips Beach, alive after a storm, (Holder.) Our shell differs from the European species in its greater size, its more distant and regular raised concentric striæ, and its color.

## ASTARTIDÆ.

CARDITA BOREALIS, Con. Gould, 94, f. 58. — Lamin.

Whole Coast. Plentiful in 3 f. mud, Eastport; rare in 40 f. off Grand Manan, (W. S.) Off Isles of Shoals, 20 f. sand, (Wh.) St. George's Bank, in 30 f. (Tufts.) Vineyard Sound, 6 – 14 f. (Ag.) Nantucket Shoals in 20 f. (Ag.) The animal agrees with that of *Astarte*.

Astarte mactracea, Linsley, Conn. Cat. 71. Desc. by Gould, Am. Jour., Sept. 1848. *A. lunulata*, Con. (?) — Lamin. Stonington, (Linsley.) New Bedford Harb. in 4 f. gravel, (Prime and W. S.) This species occurs in the Post Pliocene deposits of South Carolina, and was found alive on that coast by Lieut. Kurtz.

A. sulcata, Flem. Gould, 78, f. 46. *Pectunculus sulcatus*, Da Costa. "*A. undata*, Gould," Migh. — Lamin. et Corall. Whole Coast. Common at Eastport in 4 to 60 faths. mud, (W. S.) Marblehead Harb. at low water, (Haskell.) Stonington, (Lins.) Vineyard Sound, 6 f. (Ag.)

A. Portlandica, Mighels, Bost. Jour. iv. 345. — Casco Bay.

A. quadrans, Gould, 81, f. 48. — Lamin. et Corall. Casco Bay to Stonington, Conn. Salem Harb. in 4 f. sand, (Wh. and W. S.)

A. castanea, Say. Gould, 76, f. 45. — Lamin. From Casco Bay southward.

## CYPRINIDÆ.

Cyprina Islandica, Lam. (*Venus*) Lin. — Lamin. Whole Coast.

## CARDIADÆ.

CARDIUM ISLANDICUM, Lin. Gould, 89, f. 58. — Corall. Eastport in from 6 to 60 faths. (W. S.) Off Cape Cod, in 35 f. (Atwood.)

C. PINNULATUM, Con. Gould, 90, f. 57. — Lamin. Whole Coast.

C. MORTONI, Con. — Litt. Nantucket, R. I., and Conn.

APHRODITE GRŒNLANDICA, St. *Cardium Grœnlandicum*, Chemn. Gould, 92. *C. edentulum*, Sow. *Acardo edentulus*, Swains., 1840. *Aphrodite columba*, Lea. — Corall. Cape Cod Bay, (W. S.) and off Stonington, Conn. (Lins.)

## VENERIDÆ.

VENUS MERCENARIA, Lin. Gould. — Litt. Occurs sparingly north of Cape Cod, plentifully south of it. It is abundant in the Post Pliocene clay of Point Shirley.

V. FLUCTUOSA, Gould, 87, f. 50. — From the Bank Fisheries.

V. GEMMA, Tott. Gould, 88, f. 51. — Litt. Whole Coast.

CYTHEREA CONVEXA, Say. Gould, 84, f. 49. — Lamin. From Casco Bay to N. Y.

Var. *minor*. In Buzzard's Bay at the depth of eight fathoms, in mud, I have dredged many specimens of a *Cytherea*, none of which exceed $\frac{1}{2}$ in. in length. Its animal differs somewhat from that of *C. convexa*. It is probably *C. morrhuana*, Lins. Conn. Cat. 85, but until further examination must be regarded as a variety.

## MACTRIDÆ.

Mactra lateralis, Say. Gould, 54, f. 34, 35. — Lamin. From Cape Ann southward. Creeks near Salem, (True.)

M. ponderosa, Phil. *M. ovalis*, Gould, 53, f. 32. (preoc.) — Lamin. Eastport and Grand Manan, at low water mark, large and plentiful, (W. S.) and southward to Cape Cod.

M. solidissima, Chemn. Gould, 51. — Litt. et Lamin. Whole Coast.

M. similis, Say, 1821. — Connecticut.

## DONACIDÆ.

Mesodesma arctatum, Gould. *Mactra arctata*, Con., 1830. — Lamin. Whole Coast.

M. deauratum, Hanley. *Mactra deaurata*, Turt. *Mesodesma Jauresii*, Joannis. Gould, 58, f. 38. — St. George's Bank.

## TELLINIDÆ.

Cumingia tellinoides, Con., 1830. Gould, 56, f. 36. — Lamin. From Cape Cod southward. An examination of the animal of this species leads me to place it in this family rather than among the *Mactridæ* where it has been hitherto placed.

Tellina fusca, Phil. *Sanguinolaria fusca*, (Say, 1825.) Con. Gould. *Tellina Gronlandica*, Beck. (?) — Litt. Whole Coast.

T. PROXIMA, Brown. F. et H. *Sanguinolaria sordida*, Gould. *T. sordida*, Couth. Migh. *T. calcarea*, Lyell, etc. — Corall. Eastport to Cape Cod.

T. TENERA, Say, 1821. Gould, 68, f. 44. — Lamin. Low water to 14 f. sand and pebbles. Cape Ann to N. Y.

T. TENTA, Say. Gould, 67, f. 43. — Lamin. From Cape Cod southward.

T. VERSICOLOR, Cozzens. Dekay. Lins. — Lamin. Long Island Sound.

T. ELUCENS, Migh., Bost. Proc. i. 188. — Maine.

## SOLEMYADÆ.

SOLEMYA VELUM, Say, 1821. Gould, 35. — Litt. and Lamin. Whole Coast.

The animal has the mantle closed except at a large opening, with cirrated edges anteriorly, for the passage of the foot, and at a single small opening at the posterior extremity, also cirrated. Foot large, truncated and excavated at its extremity, which has fimbriated edges. Branchiæ consisting of a very thick lobe on each side, situated far posteriorly, and having a longitudinal sulcus at the middle in each. Palpi very small and slender. The thinness of the shell enables the animal to make surprising leaps, and I have seen it leaping or swimming about in the water for some time without touching the bottom. The leap is performed by suddenly drawing in the umbrella-shaped foot at the same time that water is expelled from the posterior opening by the closing of the valves.

S. BOREALIS, Tott. Gould, 36. — Lamin. Whole Coast.

## SOLENIDÆ.

Solecurtus gibbus, F. et H. *Solen gibbus*, Spengler. *S. Caribæus*, Lam. *Solecurtus Caribæus*, Con. Gould, 30. —Lamin. From Cape Cod southward.

S. bidens, F. et H. *Solen bidens*, Chemn. *S. fragilis*, Pult. *S. centralis*, Say, 1821. *Solecurtus fragilis*, Gould, 31. — Lamin. From Cape Cod southward.

Machæra squama, Gould, MS. *Solecurtus squama*, Blainv. *Mach. nitida*, Gould, 33, f. 25, 26. — From the Bank Fisheries.

M. costata, Gould, 34. *Solen costatus*, Say, 1821. *S. Nahantensis*, Des Moulins, 1832. *S. Sayi*, Griffith's Cuvier. — Lamin. Whole Coast.

Solen ensis, Lin. Gould, 28. — Litt. Whole Coast.

The specimens which I have received from Rhode Island and other parts of our coast, marked *S. viridis*, Say, do not agree with specimens of that shell from S. Carolina, but seem to be the young of a variety of *S. ensis*.

## ANATINIDÆ.

Anatina papyracea, Say. Gould, 47, f. 27. — Lamin. From Cape Ann southward.

Cochlodesma Leanum, Couth. Gould, 49, f. 29, 30. *Anatina Leana*, Con. 1830. — Lamin. From Casco Bay southward.

Thracia truncata, Mighels, Bost. Jour. iv. 38. 1841. Stimpson, Bost. Proc. iv. 13. — Corall. Casco Bay,

(Migh.) Mass. Bay, (W. S.) Off Martha's Vineyard, (Ag.) Off coast of Long Island, in 38 f. (C. S.)

T. COUTHOUYI, St., Bost. Proc. iv. 8. 1851. T. parva, alba, solidula, orbiculato-ovalis, sub-æquilateralis, compressa, anticè angustior, rotundata; posticè latè truncata; striis concentricis inæqualibus rugosa; sinus siphonalis latus. Ossiculum minutissimum. Long. .7, lat. .54, poll.

Corall. Eastport, Me., and Mass. Bay.

T. CONRADI, Couth. Gould, 50. — Lamin. Whole Coast. Eastport, in 6 f. (W. S.) The absence of an ossiculum in this species, (which is found in the two preceding species,) would seem sufficient to separate it generically from other *Thraciæ*. But the animal resembles so closely that of the large English species which possess the ossiculum, that I have thought it best to consider the appendage unimportant.

## PANDORIDÆ.

LYONSIA HYALINA, Con. *Ostesdesma hyalina*, Couth. Gould, 46, f. 31. — Lamin. Whole Coast.

PANDORA TRILINEATA, Say. Gould, 44. — Laminarian. Whole Coast. Eastport Harb. 5 f. mud, (W. S.) Portland Harb. (Migh.) Salem Harb. in 1 to 6 f. (Wh.) Boston Harb. in 4 f. shelly ground, (W. S.) Nantucket at low water, (Parker.) Vineyard Sound, (Ag.) Buzzard's Bay in 8 f. (Prime and W. S.)

## CORBULIDÆ.

Corbula contracta, Say. Gould, 43, f. 37. — Lamin. From Cape Cod southward.

## MYADÆ.

Glycymeris siliqua, Lam. Gould, 39. *Mya siliqua*, Chemn. — Corall. From Cape Cod northward. Nahant Beach, alive, after a storm, (W. S.) Provincetown Harb. (Tott.)

Panopæa Norvegica, Lovèn. *Mya Norvegica*, Spengl. *Panopæa arctica*, Desh. Gould, 37, f. 27. — From the Banks.

Mya truncata, Lin. Gould, 42. — Litt. to Corall. Eastport at low water, among pebbles, (W. S.) and southward to Cape Cod.

M. arenaria, Lin. Gould. — Litt. Whole Coast.

## GASTROCHÆNIDÆ.

Petricola pholadiformis, Lam. 1818. Gould. *P. fornicata*, Say, 1821. — Litt. Whole Coast.

P. dactylus, Say. Gould, 65. — Litt. Cape Cod to N. Y. I have found the differences between this and the preceding species, mentioned by Dr. Gould, to be inconstant, but I defer to his authority in regarding it distinct.

The propriety of placing this genus among the *Gastrochænidæ* may be questioned. Our species have very robust siphons which are sometimes ex-

tended to four times the length of the shell; the branchiæ are coarsely pectinated, — the outer leaflet being one third shorter than the inner one. The foot is compressed, resembling somewhat that of *Venus*. But at a point a little behind the middle of its sole or lower edge, I have detected a minute slit, from which I have once seen a byssus issuing.

The cirrhi around apertures of the siphons in *P. pholadiformis*, are complicated, but very variable, and sometimes entirely wanting, or represented only by papillæ. Much importance has been attached to the form of the cirrhi among the characters of the animals of Bivalves, but in most cases but little dependence can be placed upon them.

Saxicava arctica, Desh. F. et H. *Mya arctica*, L. *S. distorta*, Say. Gould. — Litt. to Corall. Whole Coast.

S. rugosa, Lam. *Mytilus rugosus*, O. Fabr. *Saxicava distorta*, Say. Gould. — Litt. to Corall. Whole Coast.

## PHOLADIDÆ.

Pholas costata, Lin. Gould, 27. — Lamin. Alive in the mud of New Bedford Harbor, (see Gould, Bost. Proc. ii. 81.)

P. truncata, Say. Gould, Bost. Proc. ii. 81. — Lamin. New Bedford Harbor, (Greene.) Connecticut, (Jay.)

P. crispata, Lin. Gould, 27. — Lamin. Eastport, (W. S.) to Stonington, (Lins.) and intermediate shores. Alive at Phillips Beach at low water, (True.)

Teredo dilatata, St. Bost. Proc. Oct. 1851.— In buoys, etc., Lynn, (Tufts.) What *T. navalis*, of Linsley, Conn. Cat., found in floating wood in Long Island Sound, is, I have no opportunity of determining.

# GASTEROPODA.

## PTEROPODA.

### HYALEADÆ.

HYALEA TRISPINOSA, Lesueur. — Occasionally cast ashore at Nantucket.

### LIMACINADÆ.

SPIRIALIS GOULDII, St. Pl. I. Fig. 4. Bost. Proc. iv. 8, 1851. T. ovato-globosa, vitrea, pertenuis, pellucida, lævissima, arctè et profundè umbilicata; spira conoidea; anf. 7, lineis minutis volventibus, impressis, remotis insculpti; anf. ultimus magnus; apertura spiram sub-æquans, anticè obtusa. Long. .1; lat. .075. — Whole Coast.

### CLIONIDÆ.

CLIONE BOREALIS, Gray. *Clione*, Pallas. *Clio borealis*, Lin. Dekay.

## PROSOBRANCHIATA.

### DENTALIADÆ.

Dentalium striolatum, St. Bost. Proc. Oct. 1851. *D. entalis*, Migh. (non L.) — Lamin. Corall. Casco Bay, (Migh.) Penobscot Bay, (Walden.) Eastport Harb. 10 f. mud, (W. S.) Off Grand Manan, in 40 f. gravelly mud, (W. S.) Off Isles of Shoals in 20 f. sand, (Wh.) Mass. Bay, (Tufts.) It differs from the European species to which it has been referred in being more slender, and in its frequent smoothness, — the striations being often difficult to detect.

D. occidentale, St. *D. dentale*, Gould, 155, f. 5. (non Auct.) — Deep water on the Coast of Maine, and in Mass. Bay.

### CHITONIDÆ.

Chiton apiculatus, Say, Am. Conch., No. 8. *C. pectinatus*, Gould, MS. — Laminarian. From Cape Cod southward.

C. cinereus, Lin. *C. marginatus*, Penn. Gould, 147, f. 22. — Litt. Since the discovery of the specimen mentioned by Dr. Gould, no other has been found on our coast.

C. albus, Lin. Gould, 150, f. 21. Middendorff, Malac. Rossic., i. 120. Forbes and Hanley, Brit. Moll., ii. 405. — Litt. Lamin. Eastport at low water, (W. S.) Isles of Shoals, (Wh.) to Cape Cod.

C. RUBER, Lin. Gould, 144, f. 24. Midd., Malac. Rossic., i. 117. — Lamin. From Cape Cod northward.

C. MARMOREUS, O. Fabr. F. et H. *C. levigatus*, Flem. Migh. *C. fulminatus*, Couth. Gould, 148, f. 23. — Litt. Lamin. From Cape Cod northward.

C. MENDICARIUS, Migh. et Ad., Bost. Jour., iv. 42, 1841. — Maine.

AMICULA VESTITA, Gray. *Chiton vestitus*, Brod. et Sow., 1828. *C. Emersonii*, Couth., 1838. Gould, 151, f. 19. — Corall. From Cape Cod northward. Salem Harbor, in 20 f. gravel, (Wh.)

## PATELLIDÆ.

PILIDIUM CANDIDUM, St. *Patella candida*, Couth. Gould. — Corall. D. S. Coral. From Cape Cod northward. The shell of this species does not correspond with that of *Propilidium ancyloide*, to which it is referred by Forbes and Hanley. There is perhaps some doubt as to the necessity of the genus *Propilidium*.

This species occurred to me on stones in 40 f. off Grand Manan. It has short tentacles, destitute of eyes; a large foot; the mantle with a thick edge, fringed. (?) The liver is green; above which are seen the convolutions of the thick intestine, which surround it. The intestine is filled with a reddish brown mud, and the anus opens on the back of the neck.

TECTURA TESTUDINALIS, Gray. *Patella t.*, Müll. *P.*

*amœna*, Say. *Lottia testudinalis*, Forbes. Gould, 153, f. 12. *Acmœa testudinalis*, Hanley. — Litt. Whole Coast.

T. ALVEUS, St. *Patella alveus*, Con., 1830. *Lottia alveus*, Gould, 154, f. 13. — Litt. Whole Coast. At Bird Island, in Boston Harbor, this species occurs abundantly upon stones and shells, still retaining its characters; which is sufficient to show that it is not a variety of the last.

## CALYPTRÆIDÆ.

CALYPTRÆA STRIATA, Say, J. A. N. S., v. 216, 1825. — Lamin. Whole coast. Eastport Harbor, 4 f. (W. S.) Portland Harb. (Migh.) St. George's Banks, (W. S.) Nantucket, (Ag.)

CREPIDULA FORNICATA, Lam. Say. Gould, 158, f. 17. *Patella f.*, Lin. *Crepidula glauca*, Say. Gould. — Lamin. Whole Coast.

C. UNGUIFORMIS, Lam. *C. plana*, Say. Gould, 159, f. 16. — Lamin. Whole Coast. *C. fornicata*, as well as this species, sometimes occurs in the apertures of univalves, where it preserves its color, convexity, and other characters.

C. CONVEXA, Say. Gould, 160, f. 15. — Litt. Lamin. From Mass. Bay southward.

## FISSURELLIDÆ.

DIADORA NOACHINA, Gray. *Patella Noachina*, Lin. *Cemoria Noachina*, Gould, 156, f. 18. *C. princeps*,

Migh. et Ad. *Puncturella Noachina*, Lowe. F. et H. — Corall. and D. S. Coral. From Cape Cod northward. Eastport Harbor, 25 f. rocky bottom, (W. S.) Off Manchester, Cape Ann, in 20 f. gravel, (Wh.) Var. *C. princeps* in 30 f. gravel, off Grand Manan, (W. S.)

## TROCHIDÆ.

Trochus occidentalis, Migh. et Ad., 1841. *Margarita alabastrum*, Beck, MS. Lovèn. *Trochus alabastrum*, Forbes et Hanley. — Coralline. Maine. In 30 f. gravel, off Grand Manan, (W. S.)

Margarita cinerea, Gould, 252. Lovèn. *Turbo cinereus*, Couth., 1838. — Lamin. Corall. West Isles near Eastport, in 10 f. gravel, (W. S.) In 40 f. off Grand Manan, (W. S.) and southward to Cape Cod.

M. obscura, Gould, 253, f. 171*. *Turbo obscurus*, Couth., 1838. — Lamin. Whole Coast N. of Cape Cod, and at Stonington, Conn. (fide Linsley.) Eastport, 6 f., mud, (W. S.) Grand Manan, 4 f., sand, (W. S.) Off Isles of Shoals, in 20 f. sand, (Wh.) Beverly Harb. (Ag.) Off Egg Rock, near Nahant, 17 f. sand, (Tufts and Haskell.) Provincetown Harbor, (Tott.)

M. undulata, Sow. Gould, 254, f. 172*. — Lamin. From Cape Cod northward. Grand Manan, 4 f. nullipore bottom, (W. S.)

M. argentata, Gould, 256, f. 174*. — Corall. Grand Manan, (W. S.) to Cape Cod.

M. HELICINA, Möll. Lovèn. *Turbo helicinus*, O. Fabr. *Margarita arctica*, Gould, 255, f. 173*. *Trochus helicinus*, F. et H. — Litt. Lamin. From Cape Cod northward.

M. COARCTATA, St. *Delphinula coarctata*, Mighels, Bost. Jour., iv. 349. — Casco Bay. An examination of the animal is necessary to determine the position of this species.

Dekay has described two species of *Margarita* from the vicinity of New York, — *M. multilineata* and *M. ornata*. His descriptions and figures do not enable me to determine them.

ADEORBIS COSTULATA, St., Bost. Proc., iv. 14. *Margarita? costulata*, Möll., 1842. ——? *costulata*, F. et H. *Marg. minutissima*, Mighels, 1843. (?) — Corall. Off Grand Manan in 30 f. (W. S.) to Mass. Bay.

PHASIANELLA SULCOSA, Migh., Bost. Jour., iv. 348. — Maine. It will be impossible to determine the true place of this shell without an examination of the animal, until which I leave it where Dr. Mighels has placed it.

## IANTHINIDÆ.

IANTHINA FRAGILIS, Brug. Gould, 240. — Occasionally cast ashore at Nantucket.

## PALUDINIDÆ.

MELANIA DEPYGIS, Say. Adams, in Thompson's Hist. Vermont. — Lake Champlain.

PALUDINA DECISA, Say. Gould, 227.

AMNICOLA PORATA, Gould, 229, f. 157.

A. PALLIDA, Hald. — Vermont. Conn.

VALVATA TRICARINATA, Say. Gould, 225, f. 156.

V. SINCERA, Say. Adams, in Thomps. Hist. Vermont.

V. PUPOIDEA, Gould, 226, f. 155.

## LITTORINIDÆ.

LITTORINA RUDIS, Gould, 257. *Nerita littorea*, O. Fabr. *Turbo rudis*, Don. *T. tenebrosus*, Mont. *T. obligatus*, Say. *T. vestitus*, Say. *L. Grönlandica*, Möll. *L. tenebrosa*, Forbes. Gould. — Litt. Whole Coast. I follow Clark, (An. and Mag. Nat. Hist., 2d Ser., 362,) in considering the various forms to which the synonymes apply as varieties.

L. LITTORALIS, F. et H. *Nerita littoralis*, L. *Turbo palliatus*, Say. *L. palliata*, Gould, 260, f. 177*. *L. neritoides*, Dekay. — Litt. Whole Coast.

L. IRRORATA, Gray. *Turbo irroratus*, Say, July, 1822. *Phasianella sulcata*, Lam. Aug., 1822. Ravenel, Cat. — Litt. Connecticut.

LACUNA VINCTA, Turt. Gould, 262, f. 178*. *Turbo divaricatus*, O. Fabr. (non L.) *T. vinctus*, Mont. — Litt. Lamin. Whole Coast.

L. NERITOIDEA, Gould, 263, f. 170. — Litt. Lamin. Whole Coast.

RISSOA MINUTA, St. *Turbo minutus*, Tott. *Cingula minuta*, Gould, 265, f. 171. — Litt. Whole Coast.

R. MODESTA, St. *Cingula modesta*, H. C. Lea, Bost.

Jour., v. 288, 1844. — Litt. Connecticut. *C. lævis*, Dekay, is perhaps this species.

R. LATIOR, St. *Cingula latior*, Migh. et Ad., Bost. Jour., iv. 48, 1841. — Corall. Maine.

R. EBURNEA, St., Pl. I. fig. 1. Bost. Proc., iv. 14. T. parva, ovato-conoidea, alba, nitida, lævis. Anf. 4 convexiusculi, ad suturam subangulati; apertura ovato-elliptica, labro tenui, simplici, acuto, anticè effuso. Long. .16, lat. .09, poll.

Corall. Mass. Bay.

R. ACULEUS, St., Bost. Proc., iv. 15. *Cingula aculeus*, Gould, 266, f. 172. *Paludinella aculeus*, Middendorff. (?) — Litt. Whole Coast.

R. MULTILINEATA, St., Pl. I. fig. 2. Bost. Proc., iv. 14. T. minuta, oblongo-ovata, obtusa, alba; anf. 5 convexi, striis transversis, minutis, ad 20, — ornati; apertura orbiculato-ovata, labro incrassato, effuso. Long. .1, lat. .045, poll.

Lamin. Mass. Bay.

R. MIGHELSII, St., Bost. Proc., iv. 15. *Cingula arenaria*, Migh. et Ad. — Corall. From Cape Cod northward.

R. EXARATA, St., Pl. I. fig. 3. Bost. Proc., iv. 15. T. parva, ovata, fusca, solidula, imperforata; anf. 5 convexiusculi, posticè subplicati, costis transversis, elevatis, inæquidistantibus, (tribus ad anf. supr.,) — cincti; apertura parva, ovata, labro incrassato. Long. .11, lat. .05, poll.

Lamin. Boston Harbor.

R. PELAGICA, St., Bost. Proc., iv. 15. *Cingula semicostata*, Migh. et Ad. — Corall. In 30 f. gravel, off Duck Island, Grand Manan, (W. S.) to Mass. Bay.

SKENEA PLANORBIS, F. et H. *Turbo planorbis*, O. Fabr. *Skenea serpuloides*, Gould, 247, f. 189. (non Angl.) — Litt. From Cape Cod northward.

## TURRITELLIDÆ.

TURRITELLA COSTULATA, Migh. et Ad., Bost. Jour., iv. 50. — Corall. Eastport Harb., 30 f., rocky bottom, (W. S.) Casco Bay, (Migh.)

T. AREOLATA, St., Bost. Proc., iv. 16. T. parva, subperforata, turrita, rubra, costis transversis, distantibus, quatuor, (duabus ad anf. sup.) et plicis elevatis, interruptis, — areolata; anf. 6 convexi; apertura anticè effusa; labro acuto. Long. .18, lat. .09, poll.

This is probably a young shell, but it appears distinct from any of our species. It approaches *T. reticulata*, Migh., from the Gulf of St. Lawrence, but the transverse ribs are more prominent, and the longitudinal ones less so, than in that shell.

Corall. Mass. Bay.

T. EROSA, Couth. Gould, 267. — Corall., and Dp. S. Coral. In 50 f. mud, off Campo-bello, near Eastport, Me., (W. S.) and southward to Cape Cod.

T. ACICULA, St., Pl. I. f. 5. Bost. Proc., iv. 15. T. parva, turrita, subulata, candida, tenuis; anf. 10 valdè convexi, longitudinaliter striati, costis transversis quarum tribus majoribus, cincti; apertura rotundata, anticè effusa, labro acuto. Long. .22, lat. .08, poll.

Corall. Off Grand Manan, in 40 f. sandy mud, and near Duck Island, in 5 f. sand, (W. S.) and southward to Cape Cod.

This species is distinguished from the young of *T. erosa* by its much more convex whorls and prominent ribs.

Cœcum pulchellum, St., Pl. II. f. 3. Bost. Proc., Oct. 1851. Shell in its adult state clavate, .1 inch in length and .025 inch in breadth at its broadest part, arcuated, contracted at both extremities, and having a somewhat angular appearance at its outer or dorsal outline, which is much longer than the inner. It is somewhat thick and strong, of a pale yellowish-brown color, and sculptured with about twenty-five strong rounded ribs, broader anteriorly, but narrower posteriorly, than their interspaces, not projecting sharply beyond the outline of the shell, but giving it a waved appearance. Operculum multispiral, of about eight volutions, corneous, and concave on the outer surface.

The animal agrees nearly with the English species, *C. trachea*, as described by Mr. Clark. The head projects but little in advance of the foot, which is short. The muzzle is cleft and transversely wrinkled, and has two black spots above just in front of the tentaculæ, which are thick, curved, and covered with large vibrillæ. The eyes are conspicuous, black, oval, and situated at nearly the middle of the bases of the tentaculæ, a little toward the inner sides. The operculigerous lobe projects a little beyond the operculum.

In keeping alive several individuals of this species from April to November I observed the following stages of growth: — 1st. A slender, thin, arcuated form

with few distant ribs. 2d. The anterior half of this form, left by the decadence of its posterior half, with a part of the growing adult shell. 3d. The adult form. Thus septa would appear to be thrice formed.

This species inhabits the Laminarian zone in New Bedford Harbor, where it was dredged adhering to groups of *Vermeti*. (W. S.)

## CERITHIADÆ.

APORRHAIS OCCIDENTALIS, Beck. *Rostellaria occidentalis*, Gould, 298, f. 205. — Corall. Off Campo-bello, in 50 f. mud, (W. S.) Isles of Shoals, in 20 f. sand, (Wh.)

CERITHIUM SAYI, Menke. Gould, 278, f. 183. — Litt. From Cape Cod southward.

C. GREENII, Adams. Gould, 279, f. 184. — Lamin. Boston Harb., 3 f. (W. S.) and southward.

C. NIGROCINCTUM, Ad. Gould, 277, f. 182. — Lamin. From Buzzard's Bay southward.

## VERMETIDÆ.

VERMETUS RADICULA, St. *V. lumbricalis*, Gould, 246. (non Lam.) — Lamin. From Buzzard's Bay southward.

This species may very probably be identical with *V. bicarinatus*, or *V. Knorrii* of Deshayes, or more properly, perhaps, they are all varieties of one species. Specimens from Buzzard's Bay agree with those from N. C., and differ from the West Indian shells,

(from which, probably, Deshayes established his species,) in their less prominent carinæ, and their cinereous color.

The true position of the *Vermetidæ* is difficult to determine. They have relations with the last two families in their shells, particularly in the plugging up of the upper whorls as the shell advances in growth. In the young animal, before its escape from the egg, the shell appears helicoid and reversed, thus showing some affinity with the *Pyramidellidæ*. As a description of the animal may be useful in this connection, I give it here.

Its color is a light brown, with spots and patches of black. The mantle is fringed at its margin with short filaments. The branchial plume is very large and long, situated nearly over the middle of the back of the animal. The foot is very short and broad, dilated into rounded auricles anteriorly. The muzzle is broad, not cleft; the tongue small. The tentacles are short, conical, having the eyes at their external bases. An elevated ridge runs along the back, becomes flattened into a membrane at the head, and passes round under the right tentacle, forming a kind of canal; near which is the anus. The operculum is corneous, concentric, black and hard on the inner, and lamellated on the outer surface. It is surrounded by a thin, membranous, flexible portion, about one fourth its diameter; — thus it is enabled to close its shell perfectly at the aperture, and yet to retreat far into the narrower whorls.

The eggs were deposited in July. They were soft, slightly cohering in the form of an elongated cone, bent into a half circle. When laid, the eggs were in an advanced stage of development, each containing from six to eight young animals, which had already commenced forming their shells.

## SCALARIADÆ.

Scalaria Novangliæ, Couth., 1838. Gould, 248. — Corall. Mass. Bay. Since the single specimen found by Mr. Couthouy, no other has occurred.

S. Grönlandica, Gould, 249, f. 170*. — Corall. and D. S. Coral. Eastport Harb. 10 f. sand, (W. S.) Off Head Harbor, in 50 f. (W. S.) Off Grand Manan, in 40 f. mud, (W. S.) Isles of Shoals, in 20 f. sand, (Wh.) Off Nahant, in 17 f. hard sand, (Tufts and Hask.) Off Race Pt., in 30 f. gravel, (Atw.) Nantucket Shoals, in 20 f. (Ag.)

S. lineata, Say. Gould, 250. — Lamin. From Buzzard's Bay, southward.

S. multistriata, Say. Gould, 251. — Lamin. Buzzard's Bay, (Shiverick.)

Eulima oleacea, Kurtz et Stimpson. Pl. I. fig. 6. Bost. Proc., Oct. 1851. T. parva, subulata, solida, nitidissima, alba, vel fasciis transversis pallidè fuscis, ornata; anf. 12, planati, contigui; sutura inconspicua; apertura parva, ovata. Long. .25, lat. .06, poll.

The animal is white, hyaline; tentacles almost

joining each other at their bases, where, on the external sides, are the eyes, which may be seen through the shell, when, as is usually the case, the head does not project beyond it. Foot short, broad, slightly produced at the anterior angles; the lobe above projecting a little beyond it.

This is a very variable species, especially as regards the form and length of the aperture. Conrad has described two species from the miocene of Virginia which closely resemble this. It was dredged in Buzzard's Bay, several miles from land, at the depth of eight fathoms, where the bottom is composed of a soft gray mud.

## PYRAMIDELLIDÆ.

MENESTHO ALBULA, Möll. *Turbo albulus*, O. Fabr. *Pyramis striatula*, Couth. Gould, 269, f. 174. — Corall. West Isles near Eastport, Me., in 10 f. gravel, (W. S.) Isles of Shoals, in 20 f. sand, (Wh.) Off Baker's I., in 20 f. gravel, (Wh. and W. S.) Off Cape Cod, in 30 f. shelly bottom, (Atw.)

CHEMNITZIA NIVEA, St. Bost. Proc., Oct. 1851. T. aciculata, subcylindrica, alba, nitida; anfr. 11, planati, longitudinaliter plicati, plicis rectis, interstitiis lævissimis. Long. .28, lat. .04, poll.

Animal white; head short; tentacles triangular, very broad, with the eyes at nearly the middle of their bases; foot elongated, with an arcuated indentation at its anterior terminus.

This species differs from *C. interrupta* in being more slender, in wanting revolving lines, and also totally in its station, — the deeper parts of the Coralline zone. It was taken in forty fathoms, on a muddy and gravelly bottom, off Grand Manan, a large island lying off Eastport, Maine, at the mouth of the Bay of Fundy.

C. INTERRUPTA, St., Bost. Proc., iv. 16. *Turritella interrupta*, Tott. Gould, 268, f. 173. — Lamin. Boston Harb. 3 f. (W. S.) New Bedford Harb. (Ad.) and southward.

C. PRODUCTA, St. *Jaminia producta*, Ad. *Odostomia producta*, Gould, 270, f. 175. — Litt. From Buzzard's Bay southward.

C. FUSCA, St. *Pyramis fusca*, Ad. *Odost. fusca*, Gould, 270, f. 176. — Litt. Boston Harb. (W. S.) New Bedford, (Ad.) and southward. The specimen from Boston Harbor differs considerably from those found at New Bedford, and is perhaps a different species.

C. DEALBATA, St., Bost. Proc., Oct. 1851.

It is broader than *C. bisuturalis*, has not so sharp an apex, and wants the revolving line. Dredged in Boston Harbor, in 3 f. on a shelly bottom, (W. S.)

C. MODESTA, St., Bost. Proc., iv. 16. T. parva, conica, alba, lævis ; anf. 4, planulati, ultimo medio subangulato ; sutura impressa ; apertura uniplicata, subrhomboidea. Long. .14, lat. .06, poll.

This species is more angular than *C. bisuturalis*, and has no revolving line just below the suture as in

that shell. It is very like the British *O. unidentata.* It inhabits the Coralline zone at St. George's Bank.

C. BISUTURALIS, St., Bost. Proc., iv. 16. *Turritella bisuturalis*, Say, 1821. *Jaminia exigua*, Couth., 1838. *Odost. exigua*, Gould, 272, f. 177. — Litt. Mass. Bay.

C. TRIFIDA, St. *Actæon trifidus*, Tott. *Odost. trifida*, Gould, 274, f. 179. — Litt. Buzzard's Bay to N. Y.

C. IMPRESSA, Kurtz, MS. *Turritella impressa*, Say. *Odostomia insculpta*, Dekay. (non Angl.) — Litt. Connecticut.

C. SEMINUDA, St., Bost. Proc., iv. 16. *Jaminia seminuda*, Ad. *Odost. seminuda*, Gould. — Lamin. From Mass. Bay northward.

## NATICIDÆ.

NATICA FLAVA, Gould, 239, f. 162. — Corall. D. S. Coral. From Mass. Bay northward.

N. HELICOIDES, Johnston, 1835. Lovèn. F. et H. *N. canaliculata*, Gould, 235, f. 161, 1841. *N. cornea*, Phil. Möll. *N. Gouldii*, Ad., 1847. (non Phil.) — Corall. From Mass. Bay northward.

N. HEROS, Say. Gould, 231, f. 163. — Litt. Whole Coast.

N. TRISERIATA, Say. Gould, 233, f. 165. — Litt. Whole Coast; rare south of Cape Cod.

N. GOULDII, Phil. Zeitsch. für Malak., Mai, 1845. — "Maine," Phil. This species I have not seen, but insert on the authority of the distinguished author quoted.

N. GRÖNLANDICA, Beck. Möll. *N. pusilla*, Gould, 237, f. 166. F. et H., Brit. Moll. (non Say.) — Lamin. Corall. In 40 f. off Grand Manan, (W. S.) to Cape Cod.

N. IMMACULATA, Totten. Gould, 234, f. 168. — Lamin. Whole Coast. Eastport Harb. 5 f. mud, (W. S.) Off Grand Manan, in 40 f. (W. S.) Salem Harb. 3 f. mud and sand, (Wh. and W. S.) Boston Harb. 5 f. (W. S.) Provincetown Harb. (Tott.) Stonington, (Linsley.)

N. DUPLICATA, Say. Gould, 236, f. 164. — Litt. Lamin. From Mass. Bay southward.

N. PUSILLA, Say, J. A. N. S. ii. 257, 1821. — Lamin. Buzzard's Bay in 3–8 f. (Prime and W. S.)

Lieut. Kurtz has found the shell here intended on the coast of South Carolina, and is inclined to refer it to Mr. Say's species. As it is somewhat uncertain, I append the following description.

Shell resembling in shape *N. immaculata*, minute, $\frac{1}{4}$ inch in length, thick and strong, yellowish brown, (except around the umbilicus, where it is white,) and beautifully marked with longitudinal zigzag lines of mahogany color. Umbilicus closed by an abundant white callus, leaving a narrow sulcus; — there is also much callus deposited on the pillar lip, especially where it joins the outer lip. Operculum calcareous, like that of *N. clausa*.

N. CLAUSA, Brod. et Sow. Gould, 238, f. 167. — Corall. From Cape Cod northward. Eastport and Grand Manan, in 20–50 f. gravel, (W. S.)

## VELUTINIDÆ.

VELUTINA HALIOTOIDES, Möll. *Helix haliotoides*, O. Fabr. *V. lævigata*, Flem. Gould, 241, f. 159. — Corall. From Cape Cod northward. Eastport Harb. rocks in 20 f. (W. S.) Beverly Harb. (Ag.) Off Cape Cod in 30 f. on shells, (Atw.) Provincetown Harb. (Tott.)

V. ZONATA, Gould, 242, f. 160. — Corall. From Mass. Bay northward. Off Friar's Head, Lubec, Me., on stones in 14 f. (W. S.) Off Duck Island, in 40 f. (W. S.)

LAMELLARIA PERSPICUA, Lovèn. F. et H. *Helix perspicua*, Lin. *Sigaretus haliotoideus*, Flem. Gould, 244, f. 158. — Corall. From Cape Cod northward. In 25 f. rocks, West Isles, near Eastport, Me. (W. S.) The colors of our animal differ materially from those of the European species, and the mantle seems to have a permanent sinus on the right side.

As specific differences in this genus rest almost entirely upon the animal, it is possible that we have *L. tentaculata*, also, in our waters.

## CANCELLARIADÆ.

ADMETE VIRIDULA, St. *Tritonium viridulum*, O. Fabr. *Murex costellifer*, Sow., M. C. *Cancellaria buccinoides*, Couth. (non Sow.) *C. Couthouyi*, Jay. Gould, 283, f. 190. *Admete crispa*, Möll. *Cancellaria viridula*, Lovèn. — Corall. From Cape Cod northward. Eastport and Grand Manan from 10 to 40 f. (W. S.)

Trichotropis borealis, Brod. et Sow. Gould, 300, f. 207. — Corall. From Cape Cod northward. West Isles, near Eastport, in 20 f. gravel, (W. S.) Isles of Shoals, in 15 f. (Wh.)

Cerithiopsis terebellum, St. *Cerithium terebrale*, Ad. Gould, 276, f. 181. (preoc.) *C. terebellum*, Ad., Cat. Coll. — Lamin. From Buzzard's Bay southward. An examination of the animals leads me to place this and the succeeding species in the genus *Cerithiopsis*, established by Forbes and Hanley in February of this year, for the zoöphagous *Cerithia*.

C. Emersonii, St. *Cerithium Emersonii*, Ad. Gould, 275, f. 180. — Lamin. From Buzzard's Bay southward.

## MURICIDÆ.

Ranella caudata, Say. Gould, 297, f. 204. — Lamin. From Buzzard's Bay southward.

Purpura lapillus, Lam. Gould, 301. *Buccinum lapillus*, Lin. — Litt. Whole Coast.

Nassa trivittata, Say, 1821. *Buccinum trivittatum*, Ad., 1838. Gould, 309, f. 211. — Lamin. Whole Coast.

N. vibex, Say, 1821. *Buccinum vibex*, Ad., 1838. Gould, 310, f. 212. — Lamin. From Cape Cod southward.

N. obsoleta, Say, 1821. *Buc. obsoletum*, Ad. Gould, 308, f. 210. — Litt. Whole Coast.

Buccinum undatum, Lin. Gould, 305. — Lamin. Corall. Whole Coast. Eastport at low water, plenti-

ful, (W. S.) Salem Harb., l. w. to 15 f. (Tufts.) Off Chatham, Cape Cod, 16 miles from land, abundant, (Atw.) Nantucket, (Park.)

B. PLICOSUM, Menke. Gould, 303, f. 213. *Fusus cinereus*, Say. — Litt. From Casco Bay southward. It is not improbable that the establishment of a new genus is requisite for this shell.

TRITONIUM VENTRICOSUM, St. *Fusus ventricosus*, Gray. Gould, 285, f. 200. — Corall. St. George's Banks. Nantucket Shoals, (Ag.)

It would seem that the name Tritonium could be most conveniently retained for Fusus. The names Tritonium and Triton are sufficiently distinct.

T. ISLANDICUM, Lovèn. *Murex I.*, Chemn. *Fusus I.*, Gould, 284. — Lamin. Corall. From Nantucket Shoals northward. Eastport at low water, (Ray.) Off Cape Cod, in 30 f. (Atw.) Off Lynn, in 20 f. (Tufts and Haskell.)

T. PYGMÆUM, St. *F. Islandicus*, var. *pygmæus*, Gould. *F. pygmæus*, Migh. — Corall. Whole Coast. Eastport and Grand Manan, in 6 – 50 faths. mud, (W. S.) Isles of Shoals, in 20 f. sand, (Wh.) Off Nahant, in 17 f. (Tufts and Hask.)

This species differs much from the young of *T. Islandicum*, as is seen by comparing specimens of each, of equal size. The animal also differs remarkably, in having its siphonal tube protruding far beyond the extremity of the canal of the shell, thus showing a resemblance to *Nassa*.

T. DECEMCOSTATUM, Middendorff. *Fusus decemcostatus*,

Say, 1825. Gould, 287, f. 202. — Lamin. Corall. From Cape Cod northward. Passamaquoddy Bay, in mud at low water, (Ray.) Off Nahant, in 17 f. (Tufts and Hask.) Off Cape Cod, in 35 f. (Atw.)

T. CLATHRATUM, Müll., O. Fabr. Lovèn. Midd. *Murex clathratus*, Lin. *M. Bamffius*, Don. *Fusus Bamffius*, Flem. Gould, 289, f. 198. *Trophon clathratum*, F. et H. — Corall. and D. S. Coral. From Mass. Bay northward. Off Grand Manan, in 35 f. (W. S.)

T. SCALARIFORME, St. *Fusus scalariformis*, Gould, 288, f. 203. *T. clathratum*, var., Lovèn. — Corall. and D. S. Corall. From Mass. Bay northward.

FASCIOLARIA LIGATA, Migh. et Ad. 1841. Bay of Fundy, off Campo-bello, in 20–30 f. gravel, (W. S.)

PYRULA CANALICULATA, Brug. Gould, 294, f. 206. *Murex c.*, Lin. — Lamin. From Cape Cod southward.

P. CARICA, Brug. Gould, 296. *Murex carica*, Gmel. *Pyrula auruana*, Reeve. — Lamin. From Cape Cod southward.

COLUMBELLA ROSACEA, St. *Buccinum rosaceum*, Gould, 311, f. 195. — Lamin. Corall. West Isles in 10 f. gravel, (W. S.) Isles of Shoals, in 20 f. (Wh.) The animal resembles that of *C. lunata.*

C. DISSIMILIS, St. T. parva, ovato-conica, solida, longitudinaliter substriata, fusca, sæpe albo trizonata ; anf. 5, planati, apertura dimidiam spiram subæquante. Long. .023, lat. .01, poll. — Lamin. Corall. Eastport Harbor, and Grand Manan, (W. S.)

This species differs from *C. lunata* in its want of revolving lines on the rostrum, and in its color. *Buccinum zonale*, Linsley, Connecticut, is probably the young of this species, but the name is preoccupied. The animal resembles that of *C. lunata*, except in its color, which is white.

C. LUNATA, Sow. *Nassa l.*, Say. *Buccinum l.*, Ad. Gould, 312, f. 196. — Litt. Lamin. From Cape Cod southward.

*Fusus Trumbulli*, Linsley, I have not recognized. Dekay's figure and description of *Buccinum Veatleyi*, do not enable me to determine what was meant by them.

C. GOULDIANA, Ag., MS. — Lamin. Mass. Bay.

Scarcely to be distinguished from *C. lunata*. It is larger, has a more produced rostrum, when young; and its coloring consists of narrow, waved, longitudinal reddish-brown lines, — it being seldom, if ever, banded.

The animal also differs somewhat in coloring from that of *C. lunata*.

C. AVARA, Say. Gould, 313, f. 197. — Lamin. From Mass. Bay southward.

## CONIDÆ.

MANGELIA TURRICULA, F. et H. *Murex turricula*, Mont. *Fusus turricula*, Brown. Gould, 292, f. 193. — Corall. From Cape Cod northward. Frequent in from 10 to 40 faths.

M. HARPULARIA, St. *Fusus harpularius*, Couth. Gould,

291, f. 191. — Lamin. Corall. From Cape Cod northward. Dredged at Lynn, (Tufts.) Salem, (Wh.) and Eastport, (W. S.)

M. PYRAMIDALIS, St. *Buccinum pyramidale*, Ström. *Tritonium p.*, Lovèn. *Fusus rufus*, Gould, 290, f. 192. — Corall. D. S. Coral. From Cape Cod northward, and off coast of L. I. in 46 f. Off Grand Manan, in 50 f. mud, (W. S.) Isles of Shoals, in 20 f. sand, (Wh.)

M. CANCELLATA, St. *Fusus cancellatus*, Migh. et Ad., 1841. — Corall. Casco Bay.

M. DECUSSATA, St. *Pleurotoma decussata*, Couth. Gould, 280, f. 185. — Lamin. Corall. From Cape Cod northward.

M. VIOLACEA, St. *Pleurotoma violacea*, Migh. et Ad., 1841. — Lamin. Mass. Bay, (W. S.) Casco Bay, (Migh.)

M. BICARINATA, St. *Pleurotoma bicarinata*, Couth. Gould, 281, f. 186.

PLEUROTOMA CERINUM, Kurtz et Stimpson, Pl. II. f. 2. Bost. Proc., Oct. 1851. T. fusiformi-turrita, cerea, vel cinerea, plicis longitudinalibus, circa 10, elevatis, striis transversis numerosis; anfr. 7 planiusculi; apertura oblonga, dimidiam spiram æquante; labro simplici; cauda brevissima.

Lamin. New Bedford Harb. (Prime and W. S.)

P. PLICATUM, Ad. Gould, 282, f. 187. — Lamin. From Buzzard's Bay southward.

## TECTIBRANCHIATA.

### BULLIDÆ.

BULLA HIEMALIS, Couth. Gould, 163, f. 100. — Corall. Maine to Massachusetts.

B. ORYZA, Totten. Gould, 168, f. 93. — Lamin. From Buzzard's Bay southward. Maine, (fidè Migh.) New Bedford Harb. in 4 f. mud and sand, (Prime and W. S.)

B. TRITICEA, Couth. Gould, 165, f. 98. *B. corticata*, Möll. — Corall. Off Grand Manan, in 40 f. (W. S.) Off Nahant, in 17 f. (Tufts and Hask.) Stonington, (Lins.)

B. CANALICULATA, Say. Gould, 166, f. 97. *B. obstricta*, Gould, 167, f. 76. — Lamin. From Mass. Bay southward.

B. PERTENUIS, Migh., Bost. Jour., iv. 346. Stimpson, Bost. Proc., iv. 18. — Lamin. From Cape Cod northward.

B. INCINCTA, Migh., Bost. Proc., i. 188. — Maine.

B. DEBILIS, Gould, 164, f. 95. — Corall. Whole Coast.

B. GOULDII, Couth. Gould, 163, f. 94. — Lamin. Corall. From Cape Cod northward. Provincetown Harb. (Tott.)

B. SOLITARIA, Say. *B. insculpta*, Tott. Gould, 162, f. 92. — Litt. Lamin. From Mass. Bay southward.

B. PUNCTO-STRIATA, Migh. et Ad., 1841. Stimpson, Bost. Proc., iv. 17. — Corall. From Mass. Bay northward.

PHILINE LINEOLATA, St. *Bulla lineolata*, Couth. Gould, 169, f. 99. — Lamin. Corall. From Cape Cod northward. Eastport and Grand Manan, in gravel and sand, from 3 to 30 f.

P. SINUATA, St., Pl. I. f. 7. Bost. Proc., iii. 333. P. testa minuta, ovata, alba, pellucida, longitudinaliter striata; spira conspicua; apertura anticè dilatata. Long. .07, lat. .05, poll.

Lamin. In 6 f. sand, Boston Harb. (W. S.)

P. FORMOSA, St., Bost. Proc., iii. 334. P. testa minuta, quadrato-globosa, anticè subtruncata, alba, nitida, subopaca, posticè incrassata, striis volventibus, inæquidistantibus, excavato-punctatis, vel interdum undulatis, sculpta; apice arctè et profundè perforato; columella sinuata, latè et tenuiter callo induta; labro posticè crenulato; apertura patentissima. Long. .18, lat. .14, poll.

Corall. Mass. Bay. This species may prove identical with *P. quadrata*, F. et H., or with *P. scutulum*, Lovèn.

## TORNATELLIDÆ.

ACTÆON PUNCTO-STRIATA, St. *Tornatella puncto-striata*, Ad. Gould, 245, f. 188. — Lamin. Buzzard's Bay.

## MELAMPIDÆ.

MELAMPUS CORNEUS, St. *M. bidentatus*, Say. *Auricula cornea*, Desh. *A. bidentata*, Gould, 197, f. 130. From Mass. Bay southward.

M. DENTICULATUS, Auct. *Voluta denticulata*, Mont. *Auricula denticulata*, Gould, 199, f. 127. Found about wharves, in seaports, often in situations where it is covered for half the time by the sea. It is perhaps an imported species.

CARYCHIUM EXIGUUM, Gould, in Binney's Terrest. Moll. U. S., ii. 288. *Pupa exigua*, Say. Gould, 191, f. 120. *Bulimus exiguus*, Binney.

## PNEUMOBRANCHIATA.

### LIMNÆADÆ.

ANCYLUS PARALLELUS, Hald. *A. rivularis*, Gould, 224, f. 153. (non Say.)

A. FUSCUS, Ad. Gould.

A. TARDUS, Say. — Vermont.

LIMNÆA APPRESSA, Say. — Lake Champlain.

L. DECOLLATA, Migh. et Ad. — Maine.

L. CATASCOPIUM, Say. Gould. *L. pinguis*, Say. *L. emarginata*, Say.

L. AMPLA, Migh. — Maine.

L. MAGASOMA, Say. — Lake Champlain.

L. COLUMELLA, Say. Gould. *L. macrostoma*, Say.

L. CAPERATA, Say. *L. umbilicata*, Ad. Gould.

L. HUMILIS, Say. *L. modicellus*, Say. Gould.

L. PALLIDA, Ad. — Lake Champlain.

L. DESIDIOSA, Say.

L. ELODES, Say. Gould.

L. GRACILIS, Jay. — Lake Champlain.

PHYSA HETEROSTROPHA, Say. Gould.
P. FRAGILIS, Migh. et Ad. — Maine.
P. ANCILLARIA, Say. Gould.
P. GYRINA, Say. Adams. — Vermont.
P. ELONGATA, Say. Gould.
PLANORBIS TRIVOLVIS, Say. Gould.
P. LENTUS, Say. Gould.
P. BICARINATUS, Say. Gould.
P. CAMPANULATUS, Say. Gould.
P. ARMIGERUS, Say. Gould.
P. HIRSUTUS, Gould.
P. DEFLECTUS, Say. Gould.
P. EXACUTUS, Say. Gould.
P. PARVUS, Say. Gould. *P. elevatus*, Ad. Gould.
P. DILATATUS, Gould. *P. leus*, Lea. (preoc.)

## VERTIGINIDÆ.

The want of the inferior tentacles seems sufficient ground for the separation of this family from the *Helicidæ*.

VERTIGO MILIUM, Gould, in Binney's Terrest. Moll., ii. 337. *Pupa milium*, Gould, Inv. Mass.
V. GOULDII, Gould, loc. pr. cit., ii. 332. *Pupa Gouldii*, Binney, Bost. Proc., i. 105.
V. OVATA, Say. Gould, l. c. *Pupa ovata*, Sager. Gould, Monog. *P. modesta*, Say. Gould, Inv. Mass.
V. SIMPLEX, St. *Pupa simplex*, Gould, 190, f. 121.

## PUPADÆ.

PUPA PENTODON, Binney. Gould, Bost. Jour., iv. 353.

*Vertigo pentodon*, Say. *Pupa curvidens*, Gould, 180, f. 125.

P. CONTRACTA, Say. Gould.

P. BADIA, Adams. — Vermont.

P. ARMIFERA, Say. — Vermont.

## HELICIDÆ.

BULIMUS HARPA, Pfieff., 1847. Binney, Terrest. Moll. *Helix harpa*, Say, 1824. *Pupa costulata*, Migh., 1844.

B. FALLAX, Gould, in Binney's Terrest. Moll. U. S., ii. 288. *Pupa fallax*, Say. Gould, 192, f. 123.

B. LUBRICOIDES, St. *B. lubricus*, Gould, 193, f. 124. (non Müll.) It is scarce possible that a species so widely distributed on our continent could have been imported from Europe.

HELIX ALBOLABRIS, Say. Gould.

H. NEMORALIS, Lin. *H. hortensis*, Müll. Gould. *H. subglobosa*, Binney.

H. THYROIDUS, Say. Gould.

H. DENTIFERA, Binney. — Vermont.

H. TRIDENTATA, Say. Gould.

H. PALLIATA, Say.

H. MONODON, Rackett. Gould.

H. HIRSUTA, Say. Gould.

H. CONCAVA, Say. — Vermont.

H. MINUTA, Say. H. pulchella, Gould. Binney. (non Müll.)

H. SAYII, Binney. — Maine, Vermont.

H. TRIDENTATA, Say. Gould.

H. LABYRINTHICA, Say. Gould.

H. ALTERNATA, Say. Gould.

H. STRIATELLA, Anthony. Gould.

H. EXIGUA, St., Bost. Proc., iii. 175.

This is perhaps *H. annulata*, Case, Am. Journ., 1847. That name, however, is preoccupied by Sowerby.

H. MINUSCULA, Binney.—Vermont, (Ad.) Essex County, Mass. (True.)

H. FULIGINOSA, Griffith.

H. CELLARIA, Müll. Gould.

H. INORNATA, Say.— Vermont, (Ad.)

H. ARBOREA, Say. Gould.

H. ELECTRINA, Gould.

H. INDENTATA, Say. Gould.

H. CHERSINA, Say. Gould.

H. SUPPRESSA, Say.— Conn. (Lins.)

H. MULTIDENTATA, Binney. — Vermont.

H. LINEATA, Say. Gould.

SUCCINEA OBLIQUA, Say. *S. campestris*, Gould. *S. ovalis*, Say.

S. AVARA, Say. Gould.

S. OVALIS, Gould. Binney. (non Say.)

VITRINA PELLUCIDA, Drap. Say. Adams. Binney. *Helix pellucida*, Müll. O. Fabr. *Vitrina limpida*, Gould, Binney's Terrest. Moll., ii. 58. This being a boreal species, occurring in Greenland, it is probable that it is identical with the European one to which it was referred by Mr. Say.

## LIMACIDÆ.

LIMAX CAMPESTRIS, Binney.

L. AGRESTIS, Müll. *L. tunicata*, Gould.

L. VARIEGATUS, Drap.

ARION HORTENSIS, Fér.

TEBENNOPHORUS DORSALIS, Binney. *Phylomycus dorsalis*, Binney. Adams.

T. CAROLINIENSIS, Binney. *Limax Caroliniensis*, Bosc. *L. togata*, Gould.

# CEPHALOPODA.

## DECAPODA.

### SPIRULIDÆ.

Spirula Peronii, Lam. — Off Nantucket.

### LOLIGINIDÆ.

Loligo illecebrosa, Lesueur, J. A. N. S., ii. 95. — Whole Coast.

L. pavo, Lesueur, l. c., ii. 96. — Sandy Bay, Cape Ann, (Les.)

## ERRATA ET CORRIGENDA.

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*Page* 10, *line* 6, *dele* modicè.
" 17, " 27, *for* 58, *read* 59
" 22, " 21, " 27, " 28.
" 23, " 20, " Ostesdesma, " Osteodesma.

PECTEN FUSCUS, Linsley. This name is preoccupied by Klein. It must therefore receive a new one. I would propose that of *P. brunneus*.

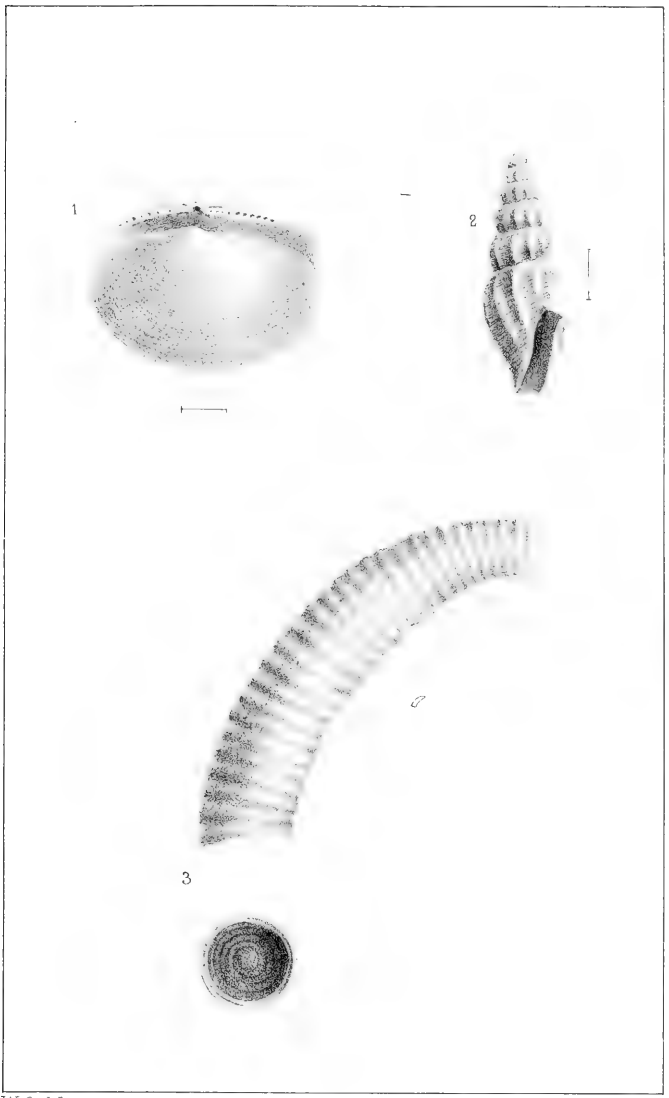
LEDA OBESA, St. As will be seen by the figure, this species is remarkable for the reduction of the prominent support for the internal ligament.

The abbreviation *f.* occurring in this work signifies *fathoms*. The depths are all reduced to low-water level.

CAMBRIDGE, *Nov.* 25, 1851.

W.S. del.

1. Rissoa eburnea, Stimpson. 2. R. multilineata, Stimpson.
3. R. exarata, Stimpson. 4. Spirialis Gouldii, Stimpson.
5. Turritella acicula, Stimpson.—6. Eulima oleacea, Kurtz & Stimpson.
7. Philine sinuata, Stimpson.




W S. del.

1. Leda obesa, Stimpson.—2. Pleurotoma cerinum, Kurtz & Stimpson.
3. Cœcum pulchellum, Stimpson.

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